

USPTO Serial Number: 10/624,294

Vernon et al.

Reply to Office Action dated October 1, 2004

Amendment to the Claims:

1. (Original) A drug delivery system for localized delivery of phenstatin to a tumor *in vivo* comprising the polymer poly(N-isopropylacrylamide) chemically bound to phenstatin.

2. (Original) The drug delivery system of Claim 1 having the formula poly(N-isopropylacrylamide -co-phenstatin).

3. (Original) The drug delivery system of Claim 1 having a lower critical solution temperature above 25 °C and below body temperature.

Cancel claim 4.

5. (Amended) The drug delivery system of Claim 1 comprising phenstatin that is acrylated to form phenstatin acrylate and then ~~in addition AAc~~ co-polymerized with poly(N-isopropylacrylamide).

6. (Amended) The drug delivery system of Claim 5 containing about 5 mol% to 10 mol% ~~Phenstatin~~ phenstatin acrylate.

7. (Amended) The drug delivery system of Claim ~~1~~ 5 wherein Phenstatin acrylate is bound to poly(N-isopropylacrylamide) through an ester bond.

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8. (Original) The drug delivery system of Claim 7 wherein Phenstatin acrylate is bound to poly(N-isopropylacrylamide) through a carbonate bond.

9. (Amended) A method of preparing the drug delivery system compound of Claim 1 comprising the steps of

- i. preparing Phenstatin acrylate; and
- ii. polymerizing said Phenstatin acrylate and poly(N-isopropylacrylamide).

10. (Amended) The method of Claim 9 wherein said polymerizing step comprises ~~co-polymerization~~ co-polymerizing with acrylic acid.

11. (Amended) The method of Claim 9 wherein Phenstatin acrylate is prepared by reacting ~~reaction of~~ Phenstatin with acryloyl chloride.

12. (Amended) The method of Claim 9 wherein Phenstatin acrylate is prepared by ~~reaction of~~ reacting Phenstatin with isopropenyl chloroformate.

13. (Amended) A method of treating a cancerous tumor ~~wherein~~ comprising injecting the drug delivery system of Claim 1 ~~is~~ locally ~~injected~~ into tumor-containing tissue.

14. (Amended) The method of Claim 13 wherein said tumor tissue is in a breast, prostate, lung or bowel tissue.